

Weak Lensing Results of the Merging Cluster A1758[†]

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ABSTRACT

Here we present the weak lensing results of A1758, which is known to have four cluster members undergoing two separate mergers, A1758N and A1758S. Weak lensing results of A1758N agree with previous weak lensing results of clusters 1E0657-558 (Bullet cluster) and MACS J0025.4-1222, whose X-ray gas components were found to be largely separated from their clusters' gravitational potentials. A1758N has a geometry that is different from previously published mergers in that one of its X-ray peaks overlays the corresponding gravitational potential and the other X-ray peak is well separated from its cluster's gravitational potential. The weak lensing mass peaks of the two northern clusters are separated at

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